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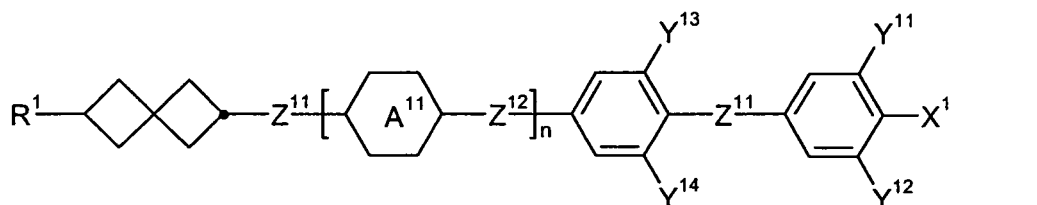
(71) Applicant: **Merck Patent GmbH**
64293 Darmstadt (DE)

(72) Inventors:
• **Czanta, Markus Dr.**
64289 Darmstadt (DE)
• **Klasen-Memmer, Melanie Dr.**
67259 Heuchelheim (DE)
• **Lietzau, Lars Dr.**
64295 Darmstadt (DE)

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(54) **Liquid crystalline medium and liquid crystal display**

(57) The instant invention relates to dielectrically positive liquid crystalline media comprising a dielectrically positive component, component A, comprising a dielectrically positive compound of formula I



wherein the parameters have the meaning given in the specification, and optionally a second dielectrically positive component, component B, comprising one or more dielectrically positive compounds having a dielectric anisotropy of more than 3 and optionally a dielectric neutral component, component C, as well as to liquid crystal displays comprising these media, especially to active matrix displays and in particular to TN and to IPS displays and also to compounds of formula I.



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EUROPEAN SEARCH REPORT

Application Number
EP 07 00 5419

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
E	WO 2007/045382 A (MERCK PATENT GMBH [DE]; LIETZAU LARS [DE]; BINDER WERNER [DE]; KLASSEN-) 26 April 2007 (2007-04-26) * pages 1-4 * * page 8; compound IAC * * pages 12-13; compounds IAC1-IAC9 * * page 21, line 12 - page 24, line 29 * * examples 73-144,289 * * claims 1-14 * -----	1-4,9, 11,12	INV. C09K19/32 C09K19/42 C09K19/34
A	WO 2004/050796 A (MERCK PATENT GMBH [DE]; TAUGERBECK ANDREAS [DE]; HECKMEIER MICHAEL [DE]) 17 June 2004 (2004-06-17) * page 1, line 23 - page 4, line 20 * * pages 8-9; compounds IAJ - IAO * * page 19, line 5 - page 22, line 20 * * claims; examples * -----	1-12	
A	WO 2004/026991 A (MERCK PATENT GMBH [DE]; HECKMEIER MICHAEL [DE]; POETSCH EIKE [DE]; REI) 1 April 2004 (2004-04-01) * page 2, line 5 - page 7, line 33 * * pages 15-29; compounds * * claims; examples; compound I * -----	1-12	
			TECHNICAL FIELDS SEARCHED (IPC)
			C09K
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		25 June 2008	Serbetsoglou, A
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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25-06-2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007045382 A	26-04-2007	NONE	
WO 2004050796 A	17-06-2004	AT 356182 T	15-03-2007
		AU 2003288021 A1	23-06-2004
		CN 1720314 A	11-01-2006
		DE 10354550 A1	17-06-2004
		EP 1567613 A1	31-08-2005
		JP 2006508154 T	09-03-2006
		KR 20050088092 A	01-09-2005
		US 2006022168 A1	02-02-2006
WO 2004026991 A	01-04-2004	AU 2003255437 A1	08-04-2004
		DE 10338111 A1	04-03-2004